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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,037	08/18/2003	Reginald Beer	GB920020042US1	3242

28722 7590 06/16/2005

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EXAMINER
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FAROOQ, MOHAMMAD O

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/643,037

Applicant(s)

BEER ET AL.

Examiner

Mohammad O. Farooq

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Tawil et al. U.S. 2002/0103913 A1.

2. As to claim 1, Tawil et al. teach, enclosure comprising:

a enclosure services processor (as it is common in conventional computer systems or networks);

at least one disk drive arrangement including a disk drive and a serial adapter coupled non-serially thereto (because of SCSI; page 1, paragraph 0003);

a serial data bus coupled between the enclosure services processor and the at least one serial adapter (because of Fibre channel; page 1, paragraph 0003);

characterized in that the at least one serial adapter is arranged for communicating serially with the enclosure services processor and non-serially with the at least one respective disk drive, such that enclosure services data may be exchanged therebetween (page 1, paragraph 0003).

3. As to claim 2, Tawil et al. teach enclosure characterized in that the disk drive has an address connection for selectively coupling to one of addressing means (item 64, fig. 5) and the adapter and wherein the adapter includes data switching means and serial conversion means, the data switching means being arranged to selectively switch the address connection between the addressing means and the serial conversion means (page 3, paragraph 0023 and 0024; page 1, paragraph 0003).

4. As to claim 3, Tawil et al. teach data bus is arranged to operate with an I2C serial protocol (as it is common in conventional computer systems; page 1, paragraph 0004).

5. As to claim 4, Tawil et al. teach characterized in that the adapter is a discrete element interposed between the disk drive and the enclosure (page 2, paragraph 0008).

6. As to claims 5 and 6, Tawil et al. teach characterized in that the serial data bus is a three line serial data bus and the serial data bus comprises a two line serial data bus (the definition of bus is "... two or more lines..." Newton's telecom dictionary; 18<sup>th</sup> edition) and a discrete interrupt connection between the adapter and the enclosure services processor (page 1, paragraph 0004).

7. As to claim 7, Tawil et al. teach characterized in that the adapter is integrated with interfacing circuitry of the enclosure (page 2, paragraph 0008).

8. As to claims 8 and 9, Tawil et al. teach characterized in that the serial data bus is a three line serial data bus and the serial data bus comprises a two line serial data bus (the definition of bus is "... two or more lines..." Newton's telecom dictionary; 18<sup>th</sup> edition) and a discrete interrupt connection between the adapter and the enclosure services processor (page 1, paragraph 0004)

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9. As to claim 10, Tawil et al. teach, the arrangement comprising:  
a disk drive (page 3, paragraph 0020); and  
a serial adapter coupled non-serially to the disk drive and arranged for coupling via a serial data bus of the enclosure to the enclosure services processor (because of Fibre channel; page 1, paragraph 0003); characterized in that the serial adapter is arranged for communicating serially with the enclosure services processor and non-serially with the disk drive, such that enclosure services data may be exchanged therebetween (page 1, paragraph 0003).

10. As to claim 19, Tawil et al. teach, the adapter comprising:  
means for coupling non-serially to the disk drive (because of SCSI; page 1, paragraph 0003);  
means for coupling via a serial data bus of the enclosure to the enclosure services processor (because of Fibre channel; page 1, paragraph 0003);  
characterized in that the adapter is arranged for communicating serially with the enclosure services processor and non-serially with the disk drive, such that enclosure services data may be exchanged therebetween (page 1, paragraph 0003).

11. As to claim 28, Tawil et al. teach, method comprising the steps of:  
initiating a request for enclosure services from the at least one disk drive, transmitting the request to a serial adapter coupled non-serially to the disk drive (because of SCSI; page 1, paragraph 0003);

translating the request into serial data via serial conversion means of the serial adapter (page 1, paragraph 0003);

transmitting the serial data from the serial adapter to an enclosure services processor of the enclosure via a serial data bus coupled therebetween (because of Fibre channel; page 1, paragraph 0003);

transmitting serial enclosure services data from the enclosure services processor to the serial adapter via the serial data bus in response to the request (page 1, paragraph 0003);

translating the serial enclosure services data into non-serial enclosure services data via the serial conversion means (page 1, paragraph 0003);

receiving the non-serial enclosure services data at the disk drive (page 1, paragraph 0003).

12. As to claim 30, Tawil et al. teach, the enclosure comprising:

an enclosure services processor (as it is common in conventional computer systems or networks);

a serial data bus coupled between the enclosure services processor and a serializer/deserializer (because of Fibre channel; page 1, paragraph 0003); and

a multiplexer (adapter since similar in function) coupled to the serializer/deserializer, a disk drive and a non-serial backplane interface, wherein the multiplexer selectively outputs parallel data from the disk drive to either the serializer/deserializer or the non-serial backplane interface, such that communication with the disk drive is selectively serial or non-serial (page 1, paragraph 0003).

13. As to claim 31, Tawil et al teach, wherein the non-serial communication is with another disk drive in the disk drive enclosure via the non-serial backplane interface, and the serial communication is with another disk drive in the disk drive enclosure via the serial data bus whose data traffic is under the control of the enclosure services processor (page 1, paragraph 0003; page 3, paragraph 0020; fig. 3)

14. Claims 11-18 are similar in limitations as claims 2-9. Tawil et al. teach apparatus as set forth in claims 2-9. Therefore, Tawil et al. also teach apparatus as set forth in claims 11-18.

15. Claims 20-27 are similar in limitations as claims 2-9. Tawil et al. teach apparatus as set forth in claims 2-9. Therefore, Tawil et al. also teach apparatus as set forth in claims 20-27.

16. Claim 29 is a method claim of apparatus claim 2. Tawil et al. teach apparatus as set forth in claim 2. Therefore, Tawil et al. also teach method as set forth in claim 29.

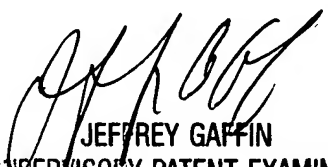


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17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad O. Farooq whose telephone number is (571) 272-4144. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A. Gaffin can be reached on (571) 272-4146. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
JEFFREY GAFFIN  
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Mohammad O. Farooq  
June 11, 2005